



IMPACT OF AUTOMATION ON LIBRARY AND INFORMATION SERVICES OF HEALTH SCIENCE LIBRARIES IN DELHI: A STUDY

DISSERTATION

**SUBMITTED IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE AWARD OF THE DEGREE OF**

Master of Library and Information Science

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CERTIFICATE

This is to Certify that Mr. Azhar Ali Khan has completed his dissertation entitled “Impact of Automation on Library and Information Services of Health Science Libraries in Delhi: A study”, in partial fulfilment of the requirements for the degree of Master of Library & Information Science. He has conducted the work under my supervision & guidance. I deemed it fit for submission.

A handwritten signature in black ink, reading 'Naushad Ali P.M.', written over a horizontal line.

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CHAPTER-I

INTRODUCTION

Need and Significance of the Study
Statement of the Problem
Definition of Terms
Objectives of the Study
Hypothesis
Methodology
Scope and Limitatioin of the Study
Organisatioin of Report

CHAPTER-I

INTRODUCTION

INFORMATION TECHNOLOGY

Information Technology is a generic term used to denote all various activities connected with location, acquisition, storage processing and communication of Information. Two other near synonymous term used simultaneously are documentation and information science, the purpose of all the three, remain the communication of information to those specialist who need it for use through information being ^{embodied in} documents. Even library science does not differ much from information technology. When the emphasis shifts from microdocuments to macrodocuments, from information of all times to nascent information, and from general users to specialist, library science become information science, Information science in turn is transformed into Information Technology.

When extensive use of mechanical, electronics or micro-electronic equipment is made in the processing and communication of information so that no time is lost in transferring the technology to the users after it has been

generated and no worth while information is lost to its potential users inspite of its huge size and tremendous growth rate. Thus the extensive use of telephone, satellite transmission, computer, micro processors, etc. in information communication has transformed information science of yesterday into Information Technology.

The term Information Technology has thus evolved out of Information Science, though both are concerned with Information handling, the former, nevertheless is more comprehensive and much wider in scope, Beside Information Science, such discipline as behavioural sciences, computing, microelectronics system theory are also included in its scope , Information Technology deals with all information activities.

DEFINITION OF INFORMATION TECHNOLOGY

UNESCO:- Defined as “Scientific, technological and engineering desciplines and management techniques used in information handling and processing, their applications, computers and their interaction with man and machines, and associated social, economic and cultural matters”.

Bedis “Information Technology is a general term used to denote all activities connected with computer based processing, storage and transfer of information. It involve

computer, electronicmedia, satellite, telecommunication and reprography.

Moll defines "Information technology as "various means of obtaining, storing and transferring information using computers, telecommunications and microelectronics".

According to **ALA Glossary**, "Information technology is the application of computers and other technologies to the acquisition, organisation, storage, retrieval and dissemination of information".

LIBRARY AUTOMATION

Library automation means the application of computers and utilization of computer based product and services in the performance of different library operations and function or in the provision of various service and production of output products.

Automation implies a high degree of mechanization wherein routine and repetitive task or operation and process are left to be performed by machine with little or no intervention by human beings.

According to **Webstar** dictionary the technique of moving in apparatus, a process or a system operator automatically".

Harder define IT initially as “The automatic handling of parts between progressive production processes”. In other words, library automation in simple terms, the application of machine to perform the several routine, repetitive and clerical task involved in different library functions and services.

Objectives of Library Automation

The broad objective of any library automation programme may be said to as follows.

- (1) Improve the efficiency of a given function for instance an automated book acquisition system enables faster processing of books request into book order and of book received.
- (2) If a library catalogue is made computer-readable and interactively searchable, the on-line catalogue can be used to provide for a greater Accessibility to the library holding than by called catalogue improve the cost efficiency of library operations, this is often possible because a single input is used in several operation relieve professional man power of tasks which are routine repetitive or clerical.

Areas of Library Automation

Since the 1960's libraries have used technology in general and computers in particular, to automate the following areas in wide range of administrative public and technical services task.

- (1) Library house keeping operation and services
- (2) Information storage, retrieval and dissemination.

(1) Library House keeping Operation and Services

The library house keeping jobs are performed mainly for controlling the stock of the library and acquisition of materials, these job include selection, ordering, acquisition processing, cataloguing and circulation control. The jobs also include maintenance and updating of the catalogue , choosing the suppliers, sending reminders getting book selection tools etc. The computer can present the existing picture of library stock by describing and keeping records of the where about of each items of the stock.

The house keeping operation in a library that have been automated successfully are:

Acquisition of Documents

In manual acquisition system one finds that library has to maintain several paper files and records, some of the

task involved in Administration and managements of acquisition functions are of routine or clerical nature eg filling of cards passing of bills. These are the routine jobs in the library and require repetitive operations, the respective operation and requisite checking can be well be done by computer, Automated book acquisition generally have following goals.

- (1) better control over budget
- (2) elimination of wasteful duplication of efforts
- (3) faster processing of book orders and receipts.

Cataloguing

The catalogue of a library is most important record, a good catalogue enables both users and library staff to effectively utilizes the library resources.

The use of computer in cataloguing is as follows:

- (i) It is quite possible to produce catalogue cards much more efficiently since with a single keyboarding efforts several type of cards are produced
- (ii) It is minimize data entry or key boarding efforts.
- (iii) It is quite possible to produce book catalogue i.e. catalogue records arranged in the form of a list of entries and housed as books.

Circulation

Basically circulation of materials or document service to user is the life stream of library service, Manual circulation system involve simple but repetitive activities and considerable amount of record keeping eg record of issue, borrowers, overdue etc.

The principal benefits of automated circulation controls are:

- (i) To ensure rapid changing and discharging of document
- (ii) To update loan files
- (iii) to prepare statistic
- (iv) To check over due books and to prepare the reminder

Serial Control

Serials control is a major task in the library, serials includes journals, newspaper, annual reports, monographs series etc.

A computer can hold records of the various particulars about serial such as periodicity, frequency of arrival, computerization is the right way to get optimal efficiency and faster service.

Automated serials control system is expected to have the following capabilities.

- (1) Ensure that issue received are properly registered
- (2) Send out reminders for issues not yet received
- (3) Prepare list of serials by vendors
- (4) Maintain record of payment expenditure and budget by funds.
- (5) Prepare routing slip for Journal issue
- (6) Prepare list of serials ready for binding
- (7) Monitor the expiry of Journal subscription and send out several orders to publishers/vendors to prepare list of search due for renewal.

2 Information Services

In the field of information retrieval, the computer can produce indexes and file them these may be printed when required. The computer can also be used for making current awareness searches. The computer based information retrieval system has been very effective, because of the availability of large files of bibliography records. The application of the computer to information services comprise generation and collection of information retrieval, CAS, SDI, computerised data bases, on-line searching, Information transfer and so on.

Special Library

A special library is directly related to a specialized branch of knowledge reflected in scientific and technological research as well as industrial development the role of a specialized library is a self evident by the fact that a specific knowledge by imperial evidence and its evaluation.

Unlike public library or an Academic library, A special library has its entire work directed toward supporting the activities and advancing the academic growth of the organisation . **Dr. S. R. Ranganathan** prefer^s to call a specialist library which is built up to supply detailed information respecting some limited subject field scientific, technological or otherwise, the resource are specialized and the users are specialist. It is therefore correct to say that the special library science have a major share in the growth of knowledge and evaluation of human civilization.

Health Science Libraries

Health is Wealth, it is an old proverb that the first happiness of a men is self health. A healthy body and healthy mind can do wonders, each nation tried to do its best to maintain the health of its citizens, and after the well being of their people. Thus it becomes imperative for

the govt of a country to look after the well being of the people and so the govt provide buxom budget for health science and medical education so that the country can produce more and more medical profession for the upkeep of the health, development and research in medicine to eradicate illness in the country.

Medical education has an important role to play in the health of the nation, As such Medical Council of India is charged with responsibilities of teaching and maintaining standards of examination and expansion of medical education in our country. Health education is essential to educate people or disseminate scientific knowledge about prevention of disease and promotion of health.

Health information is the most important tools in planning, implementation and evaluation of any health service programme.

Now a days we prefer to use the term health sciences in place of the word Medicine, that is why, medical librarians are being called as a health sciences librarian, other terms being employed are health sciences libraries and health science librarians.

According to (Dr) Krishan Kumar "Health Science Libraries are special libraries which exist to serve their

parent institution and further the objective of the institution served, the objective of health sciences institution are to promote health and heal the sick. *"unquote"*

Type of Health Science Libraries

We may recognize the following types of health science libraries.

- (i) **A Medical School:** may be usually in or adjacent to the teaching hospital.
- (ii) **Hospitals:** the hospital may be a teaching or non teaching hospitals. A hospital library has to serve patient, in addition to medical and nursing staff.
- (iii) **Postgraduate Institute:** these are concerned with specialist education and research for certain medical specialist these should be distinguished from post graduate medical education.
- (iv) **Private Societies/Private Institution:** Indian medical association etc. belong to this category these are run by their own, funds.
- (v) **Government Dept:** Ministry of Health and Family welfare, Govt of India Health Scheme Central Govt such other dept. belong to this category.

- (vi) **Dental Schools:** Like Medical Schools/College dental school are included in this category
- (vii) **School of Nursing:** Nurses Training Schools are attached to hospitals, Besides there are also separate school or college of nursing with greater emphasis on theoretical aspect integrated with practical experience.
- (viii) **Pharmaceutical Companies:** Libraries in pharmaceuticals companies are similar to other industrial special libraries.
- (ix) **Allied Health Professions:** Allied health professions include medical social work, physiotherapy, radiography, are included in this category.

Health Science Libraries in India

The need for an effective and dynamic information system to support the planning and decision making in the field of health sciences is well recognized to day, this conceptual changes occurred due to the result of the several factors which have been influencing the growth and development of health science infrastructure of the country. Health science libraries form an integral part of this structure therefore these libraries have to be viewed in this context though they have not kept pace with the growing

information needs of the various categories of workers in the health sciences.

Infrastructure of Health Science Library in India

The growth and development of health science lib's in India is directly related to the growth and development of these institution, at present India has about 680 libraries in the field of health sciences. The present situation of the health science libraries is given as under:

- (1) The no of medical libraries from 32 in 1945 has increased to 260 in 1966 and is now estimated to be about 680, this is particularly owing to the tremendous increase in educational facilities and research infrastructure in the post independence era.
- (2) The metropolitan centres like Delhi, Chennai, Calcutta, Mumbai and state capital cities like Banglore, Hyderabad etc. have the largest cluster of health science libraries.
- (3) Some states such as West Bengal, Maharastra, Kerala Karnatka, Andhra Pradesh, Tamil Nadu and union territories of Delhi Chandigarh and Pandicherry are better served by the library facility than other states like Madhaya Pradesh, Uttar Pradesh and Rajasthan.

- (4) The libraries attached to the postgraduate institutions of medical education and research and the research institution under the ICMR and the Council of Scientific and Industrial Research are comparatively better organised in term of their collections, organisation and services.
- (5) The National Institute like National Institute of Nutrition, the NIHF, the National Institute of Mental Health and neuro sciences, the national institute of virology, the Central Drug Research Institute, the Central Food Technology Research Institute, the All India Institute of Hygiene and Public Health, the Industrial Toxicological Research Centre and the National Medical Library are providing documentation and information services of various type of users in the country.

Health Science Libraries in Delhi

Delhi has a unique distinction of having the largest cluster of health science libraries in India, the resource of the 36 medical library located in this capital city are probably the best which any health professionals can think of using for his literature needs. The libraries includes under it is 9 colleges, 5 hospital, 8 research institute 4 govt

dept libraries, 6 statutory councils, 2 association, the W.H.O. Regional office library and the NML.

It may be worth noting may be that Delhi appeared on the map of Medical Libraries quite late as compared to the presidency towns of Calcutta, Chennai, Mumbai the first to appear on the science was the Malaria Institute of India (now the national institute of communicable disease) in 1909. This was followed by the lady harding Medical College in 1916 and the DGIMS library (now NML) in 1927. All other libraries were established during the period 1952 to 1971. The first union catalogues of Medical periodical published by the Indian research fund associations (now ICMR) in 1933.

National Institute of Health and Family Welfare (NIHFW)

The National Institute of Health and family welfare came into existence on March 9, 1977, at New Delhi, following amalgamation of the National Institute of Health Administration and Education (NIHAE) and the National Institute of family Planning (NIFP) the NIHAE aimed at providing training in management method and techniques for senior health administrator of health services and consultation services to health institution in the country.

The Documentation unit of the NIHFW has been engaged in a variety of activities and play an important role as a cleaning house of information, the unit provide documentation services to the researches policy makers, workers in the field of health population and family welfare, these services medical reference services, the SDI, services the literature search services, the compilation of bibliographies, the consultancy services etc., the information dissemination activities of the centre include the list of addition the press clipping service, the current content service and compilation of bibliographies. The library of NIHFW is the resource centre of the documentation units and feeding the information needs to the documentation units with its vast variety of collection which contains no of highly specialized current journals and a large no of books along with reference collection.

All India Institute of Medical Science (AIIMS)

AIIMS, a premier institute of the country, has grown after Independence as a specialized institution in the field of Medical Science, All India Institute of Medical Sciences was established in 1956 as an autonomous body under an act of parliament at Delhi to concentrate on training of highly qualified teachers and researchers in the field of Medical Sciences. The library named after the first Director, DR BB

Dixit, it provides services to student, staff and research workers of all levels. The library has been enriched by donations from collection fuetan, Raj Kumari Amrit Kaur and Col, Amir Chand, it contain 23,000 Vol. of bound Journal, 37,000 book, 8000 pamphlet, a monograph and report, and subscribed to about 500 periodicals, A considerable no of back volume of journals have been procured service provided include references on demand, bibliographies and photo duplication.

AIIMS provides various services to its readers and the computerization of the library is admirable, especially when we are passing through such a phase where the computerisation of the libraries is must particularly in the field of sciences and technology where the growth of literature is more rapid than the other field of knowledge.

National Medical Library

The National Medical Library is one of the largest medical library in the South Asian region. As per the Information available the library sources, the total collection of the library is 2, 58, 9992 which included 99, 114 books and reports, 124, 240 volume of periodicals and thousands of pamphlets off prints. It subscribes over 2000 current journals and reserved over 300 periodicals on graties.

The special features of its collection is the 19th century Medical literature, In addition to the routine services like ILL, documentation service etc.

The documentation section of the library has been assigned the responsibility of compilation and publication of cometation tools for quick dissemination of information about bio medical literature, the documentation service covers .preparation of Indexes and abstract of biomedical literature in English and Indian languages union catalogue, manuals and directories. etc, In the discipline of health sciences the NML is also coordinating various foreign agencies and Institution for generating information resources for eg, through the (WHO) Regional office for South East Asia, Delhi It is providing Medline Search Service (a Computerised bibliographical search of bio medical literatures) since July 1978. The role of the NML has been tremendous appreciated by research scholars and scientist for it portion valuable information and documentation activities.

Need and Significance of the Study

We are now in an age of information explosion, new researches generate huge amount of information in every discipline particularly in medical field. The information is

doubling in every ten year and now the doubling time is coming down more and more day by day. Therefore, searching and collecting information has become a very difficult task and for this one has to put great efforts. It is impossible to handled it manually for an individual medical scientist to keep abreast of all information being generated all over the world. Present study is intended to know the impact of automation on various library and information services health science libraries in Delhi. To find out whether the automated system will save the time of medicos and to know the satisfaction level of users regarding computerisation library services.

On the basis of this study, investigator can identify the problems which are facing by the health scientist while using the various services of the library and suggest how to improve its services to fulfill the information needs of the users.

✓ Statement of Problem

The problem for the present study entitled "Impact of Automation on Library and Information Services of Health science Library in Delhi: A study".

DEFINING OF TERMS:**Impact**

It should be reserved for actual or figurative collision and not used as a stronger word for effect or impression. (Word perfect).

Automation

The technique of moving in apparatus process or a systems operate automatically (Oxford English Dictionary).

The automatic handling of parts between progressive production process. (Harder).

Library

A collection of books and other literacy materials kept for reading , study and collection (Oxford English Dictionary).

A room or building housing a collection of books usually arranged to some plan (Webstar dictionary of English language).

Information

According to Oxford English Dictionary, “An assemblage of data in a comprehensible form, recorded on paper or some other medium and capable of communication”.

Services

According to Longman New Universal Dictionary, “Service is a act performed for the benefit or advantage of a person, institution”.

According to *Oxford English Dictionary* “Services is the action of serving, helping or benefiting, conduct tending to the welfare or advantage of another”.

Health Science According to *Webstar Dictionary*. “It is concerned with or relating to the practice of medicine often as contrasted with surgery”.

Study

According to *Oxford English dictionary* “Study is a work presenting the result of investigation into a particular system”.

According to *Random House Dictionary of English* language study in the process of acquiring knowledge”.

Objectives of the Study

The primary objective of the study is to investigate the impact of Automation on library and information service of health science libraries of Delhi.

The other objective of the study are as follows.

- (1) To know the frequency of the user to visit the library
- (2) To find out the purpose of the library visit.
- (3) To ascertain how much user are using CD-ROM and online services.
- (4) To identify different medium of getting bibliographic details.
- (5) To find out how fast your query has been fulfilled through online service.
- (6) To determine the opinion of the user toward the system.
- (7) To find out whether networking is available in health science libraries or not .
- (8) To find out the available infrastructure facility are sufficient in health science libraries.
- (9) to ascertain the opinion of the user regarding user education in health science libraries.
- (10) To assess the satisfaction of the user regarding overall functions of health science libraries.

- (11) To findout the awareness of user to the health science library services.
- (12) To find out the awareness of users regarding computerised services provided by medical library.
- (13) To find out the satisfaction level of user with the computerised service in health science libraries.
- (14) To the assess the satisfaction of the users with regard to the working hour of dept. different sections of health science libraries.
- (15) To find out the impact of Automation on house keeping area of health science libraries.
- (16) To identify the problem faced by users of health science libraries while using Information Technology.
- (17) To determine the opinion of user towards the photo copying services provided by health science libraries.
- (18) To findout that after computerisation of library services, the work would be improved or not.
- (19) To know as the result of use of Information Technology would the status of staff is improved.
- (20) To know whether the library uses multimedia

Hypothesis

- (1) Automation has made a considerable impact on the services of in Delhi.

- (2) Most of the user are not aware about the various computerised services provided by health science libraries.
- (3) Automated library services in the health science libraries may be more beneficial than manual services to the user.

Methodology

The present study is conducted on a sample of 160 users of three Health Science Libraries in Delhi, i.e, (NML, AIIMS, NIHFV).

The tool used for the present study were questionnaire observation and informal interview firstly investigator choose the sample on the basis stratified method and circulate the questionnaire according to random method.

Method of Data Collection

For this study the data was collected though a questionnaire observation and informal interview A questionnaire consisting 22 questions was designed to elicit the opinion of the users. Investigator also asked some question to some users and library staff and also make a separate questionnaire for the staff in which 17 question was designed to elicit the opinion of the staff.

Scope and Limitation of the Study

The present study is entitled impact of automation on library and information service in health science libraries of Delhi: A study the main objective of the study is to investigate the view of the user regarding the impact of Automation on housekeeping area of health science libraries.

In order to make an intensive study, the scope of the topic has limited to only three health science libraries of Delhi. Shortage of time is the biggest hindrance in the study, when the survey was conducted most of the medical student were busy in their examination.

Organisation of Report

Chapter 1

Introduction

The introductory chapter deals with small description about Information Technology, library automation, medical library, medical library in Delhi, India, followed by need and significance of the study, statement of the problem, objective, scope and limitation of the study.

Chapter II

Review of related literature a total no of 27 previously published literature related to impact of

automation on library and information service of health science libraries are summarized.

Chapter III

Methodology

This chapter deals with the statement of the problem, objectives, hypothesis, methodology, sample population, variable taken, tool used for study, pilot survey and data analysis method.

Chapter IV

Analysis and Interpretation of data

This chapter deals with the analysis and interpretation of data collected through questionnaire.

Chapter V

Conclusion, findings, suggestions recommendation for further research.

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CHAPTER-II

REVIEW OF RELATED LITERATURE

Review of Related Literature

Review of related literature is very essential in a new research topic. Study of related literatures implies locating, reading and evaluating reports of research as well as report of casual observation and opinion that are related to the Individual's planned research project.

In any worth while study in the field of research, the research must have an adequate knowledge with the work that has already been done in the area of his research. Investigator must have an up to date information about what has been thought and done in the area of his research.

In brief this chapter present an overall review of studies conducted abroad as well as in India in a chronological order regarding the topic. Impact of automation on library services specially in health science libraries. Investigator reviewed only those studies which were similar to the present study or indirectly related to the present study.

Agarwal, SN and Khan, R.R.¹ (1980) Conducted a study under the title "Networking and Resourse sharing in health

science libraries in India: A study". The objective of the study was to know the availabilities of networking facilities in health science libraries . The questionnaire method was used to conduct the survey, the important finding was libraries dose not form a network with National Medical Library, so it is essential that health science libraries should form a network with National Medical Library at the national level.

Krishan kumar ² (1982) Made a study under the title "User survey: identification of users and their information needs in Health Science Libraries". The major objectives of the study were (i) to find out the type of information required by medicos (ii) to know about most used information by medicos (iii) to know the problems of access to information. The important findings were (i) the majority of the scientist need active translation services from the following language to English, German, French and Japanese (ii) Majority of Medicos normally required information regarding research & development.

Schlatter, M Warren ³ (1985) In his study "Micro computer in the health science libraries: A case study". Tried to findout the year of introducing of microcomputers for users in the health science libraries.

The questionnaire method was used to collect the data. The result of the study was that staff member express reservation about the appropriateness of microcomputers for users in the health science libraries.

Dixit Ram Prakash ⁴ (1987) Made a study under the title "users survey of National Medical Library: an overview". The objective of the study were to find. The use of library, evaluation of library collection, organisation of material, circulation and reference service, A questionnaire method was used to conduct the survey. The major findings were (i) periodical section of the library used closed access system, users were not satisfied with the system (ii) users wanted that index to Indian Medical Periodical should be brought out in more updated fashion (iii) user felt that the classification and cataloguing system of the library should be done in timely (iv) charges of photocopying services is high, user demanded to open the library on all Sunday (v) and to open a canteen in National Medical Library building itself.

Bhatt, MK ⁵ (1988) In his article "Health science library and information network in India: Some problem possibilities". Discusses that networking is one of the most effective ways of the sharing the resources which

are always search to meet the information needs of the users whose number variety and expectation are constantly rising, but networking is not a panacea for all the ill or deficiencies with which the present health science libraries system is suffering.

Majid Pathan A and Karisidappa, CR ⁶ (1989)

Conducted a study under the title "Health science library network for India": The objective of the study was (i) To ascertain that library share the resources by using the internet (ii) To know that Medicos are satisfied with the resource sharing through the internet. The questionnaire was used to conduct the study. The main result of the study was the network are the result of an urgent need faced by libraries as their collection is sufficient to meet the demand on biomedical information.

Richwine, Peggy W ⁷ (1990) Conducted a study under the title "CD-ROM Medline training: A survey of Medical school libraries". The objective of the study was to check whether user guides and vendor produced tutorials. are helpful or not. The questionnaire and interview method were used to collect data for the study. The major findings of the study was user guide and vendor produce

tutorials are helpful but are not usually a major aspect of the training

Faries, Cinde ⁸ (1990) Conducted a study under the title “User reactions to CD-ROM: the penn state experience” the objective of the study was to determine the reaction of users towards the CD-ROM. The questionnaire method was used. The important finding was:- the users interest toward the CD-ROM was very interesting with the help of the study library determined what type of training should be provided to the user to use the CD-ROM.

Mishra, Bhawa nath ⁹ (1991) Made a study under the title “Application of computers in library and information activities in India:A survey”. The objective of the study was to know whether the application of computer in the library increase the efficiency of library services. The questionnaire method was used to conduct the survey. The important findings of the study were introduction of automation in libraries is now made essential, it leads to better and quick service with a minimum possible staff, moreover it is economical and help in achieving accuracy.

Varalakshmi, RSR ¹⁰ (1991) Made a study under the title “Regional health information system: A proposal”. The

objective of the study was to facilitate sharing of data and thus provide information retrieval (ii) To act as a liaison for exchange of Medical Information .The questionnaire method was used to conduct the survey. The important findings was emergence of new information environment, a result of knowledge explosion and the accelerated growth of new technologies prompt the libraries towards networking instead of remaining an array of isolated libraries working independently.

Dixit, R.P. ¹¹ (1992) Study under the title, "Information needs of Medical Scientist". The objective of the study was To know the information needs of a medical Scientist regarding the type of information required; the information source used; and the various approaches to information: to evaluate the various services provide by the Information Centre attached to ICMR. The questionnaire method was used to conduct the survey. The major finding of the study was chemical abstract, biological abstract and other abstracting journals are commonly used and required by the scientists, A study should not be under taken immediately to access the needs of the users.

Samal, PK and Snehlata ¹² (1992) Conducted the study under the title "CD-ROM Networking in India with special reference to health science libraries". The objective of the study was to determine the reactions of the users towards the CD-ROM Networking.

The major findings of the study was that the users are taking lot of interest in the CD-ROM Networking.

Mittal, Rekha ¹³ (1992) Made a study under the title "Acquisition and distribution of serial covered in Index medicus and Excerpta medica an analytical study". The following objective of the study was: (i) to focus serials of IM and EM which are not available in the country in terms of subject scope and country in origin (ii) to highlight the availability of search covered in Index Medicus and Excerpta medica in library of Medical Institute. The questionnaire method was used to conduct the survey, the major findings of the study was (i) The study reveals that the coverage of IM title in NUCSSI data base is 62.36% EM and 54.32 and IM + EM 68.65% It implies that 31.35% of important serials titles which are covered in IM + EM are not available in the country (ii) The library in North zone have better collection in comparison to library of other zones.

Chary, Sampatha K & Murthy, Radhakrishna,S¹⁴ (1993)

In their study "Biomedical library and information facilities in Andhra Pradesh: A study". With special reference to Nutrition Information facilities "Tried to know the level of biomedical library information service in Andhra Pradesh. The questionnaire method was used for data collection. The important findings of the study were (i) In Andhra pradesh library and information centres are providing modest services to their users (ii) In adequate the resource and man power, lower scales are a few reason for under development of these libraries.

Thaivanayagam ¹⁵ (1993) Conducted a study under a title "Modern technology on health science libraries online or CD-ROM databases". The objectives were (i) To know how much essential a CD-ROM database an online (ii) To find out the merits and demerits of online system and CD-ROM database. The findings of the study were (i) The computer cannot think for the searcher, so the success of the search therefore, depend one terminology and how it is manipulated false drop (ii) A given data base, may only be available for few recent years.

Dalai, BK and Ramesh, DB ¹⁶ (1993) Made a study under the title user studies "A tool for evaluation of a

special library: A case study ". The objective of the study were to know (i) The extent of the Library used (ii) Needs and requirement of a various categories of uses (iii) Peak hours of highest usage. The data used for this study has been collected to questionnaire, borrower cards , circulation register observation and visitor registers for outsiders and internal staff. Major findings and suggestions were (i) Overall collection of all type of literature was not adequate (ii) User demanded that new acquisition policy should be made to improve the collection (iii) Library should subscribe current journals to meet the information needs of research scholars.

PalamYandy, MV ¹⁷ (1993) Conducted a study under the title : "Automation of Arvind Eye Hospital library using CDS/ISIS". The objective of the study was: (i) To know library functional system supported by CDS/ISIS (ii) To identify various library services supported by CDS/ISIS. Data Collection was done by using the questionnaire method also by interview method. The important findings of the study showed that (i) The library had acquire CDS/ISIS only because it was being provided free of cost by NISSAT (ii) User was satisfied with the facilities available in CDS/ISIS.

Kaliya Perumal and Thandawa Moorthy ¹⁸ (1993) Made a survey under the title "A survey of modern technological development in Health science libraries in Madras". The objective of the study was (i) Identification of technological development in health care libraries in Madras city. (ii) To find out the remedy to overcome these problems. (iii) Identification of major problems in adopting modern technology. A questionnaire method was used to collect the data. The major findings of the study were that there were many more problems in adopting modern technologies development in health care libraries in Madras. Staff members are in favour of modern technological development in health care libraries.

Ravinder, Kumar ¹⁹ (1993) Conducted a study under the title "Networking among Indian Medical research institutes and primary health centres in rural areas: A perspective study". The objective of the study was to know the awareness among Medicos who are actively involved in the field of health science in different medical research institutes so that they can develop R & D work for better quality of life. The questionnaire and interview method was used to collect the data. The major finding of the study was that the latest technology i.e. networking is not

available in rural areas like PHCs & rural health worker to improve the quality of life.

Kumar, RP ²⁰ (1993) Made a study under the title “Database search facility in AIIMS library: A case study”. The main objective of the study were to find out the readers view, about the database search facility. A questionnaire method was used to conduct the survey the major findings were (i) The library does not have more work stations. So user are not satisfied (ii) Users are also wanted that there should be a provision to transfer the data to their own floppy (iii) The facility of Database search is limited so user want that facility should be extended to various departments to increase its utilisation.

Samal, PK and Sangeeta Gupta ²¹ (1994) Made a study under the title “use of CD-ROM popline data base in NIH FW - A case study ”. The objective of the study was to find out the user view about the CD-ROM popline data base in NIHFWS. A questionnaire method was used to conduct the study. The major finding of this study is that (i) The facility of Data base search is limited so user want that facility should be extended to various department to increase its utilization. (ii) The NIHFWS

library should also provide more workstation because library does not have more work station.

Adebonojo LG, & Earl ²² (1994) Conducted a study under the title “Clinical departmental use of three CD-ROM database, Medline, Embase and AGRICOLA: A case study”. The objective of the study was to find out the overlap rate of information among the above data bases. The questionnaire method was used to conduct the survey. A table comprising the total no of relevant articles retrieved for all nine question and the percentage of unique hits showing that the overlap rate among the data bases was substantial in given.

Martinez Arellano, Filiberto F ²³ (1994) Made a study “Under the title user attitude and behaviour before and after the implementation of an online catalogue”. The objective of the study was to identify changes in user attitudes and behaviour when dealing with a newly implemented online catalogue . The questionnaire method was used to collect relevant data. The major finding of the study was (i) After introducing online catalogue, the number of library users has been increased rapidly (ii) and increasement in successful searching was also noticed.

Rao, SS ²⁴ (1994) Conducted a study under the title “Use of Medline CD-ROM database in Delhi libraries: NISSAT study”. The objective of the study was to ascertain that the libraries in Delhi were acquiring Medline database in CD-ROM base and had started search service also. The questionnaire method was used to conduct the survey the important findings of the study was that some of the institute in Delhi was acquiring medline database the NIC & AIIMS have been able to install multiuser multidisc, CD-Net environment where users are encouraged to conduct their own search.

Sita Lakshmi ²⁵ (1995) In her study “Biomedical information for health for all”. Made an attempt to find out whether training facilities for medical and paramedical man power for meeting the requirement of the programme. (ii) To find out rural health care is provided in rural areas.. The major finding of the study were (i) There was no facility for treatment of disease through hospital care referral, for intermediary and tertiary care (ii) There was no establishment of large number of primary health centre with village as the base.

Suryanath Singh and Garge, BS ²⁶ (1995) Made a study under the title “Role of multimedia/hypermedia in

biomedical information services in India". The objective of the study were (i) To know the role of multimedia/hypermedia in biomedical information services (ii) to know how beneficial the multimedia/hypermedia in Biomedical information served. The findings and suggestions of the study was, the hardware and software requirement for multimedia work station have been suggested, the use of multimedia and hypermedia and its product in the field of biomedicine viz. cardiology, diabetics are highlighted to some extent

Suryanath Singh ²⁷ (1996) Conducted a study under the title "Internet An approach to finding answers to biomedical information". The objective of the study was to know the internet was helpful to collect biomedical information. The questionnaire and interview method was also conducted to collect the relevant data. The finding of the study was that the internet does not give a update information about the biomedical subject.

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CHAPTER-III

METHODOLOGY

Statement of the problem
Objectives of the Study
Hypothesis
Methodology
Tools used for the study
Sample Population
Variable taken
Pilot Survey
Data collection procedure
Data Analysis Method

CHAPTER - III

METHODOLOGY

This chapter deals with the methodology which has been discussed under the following headings.

- Statement of problem
- Objectives of the study
- Hypothesis
- Methodology
- Tools used for the study
- Sample population
- Variable taken
- Pilot survey
- Data collection procedure
- Data Analysis method.

Statement of the Problem:

The problem for the present study is entitled “Impact of automation on library and information services of Health Science Libraries in Delhi: A study”.

Objective of the Study

The primary objective of the study is to investigate the impact of Automation on library services in Medical library of Delhi.

The specific objective of the study are as follows.

- (1) To know the frequency of the user to visit the library.
- (2) To find out the purpose of the library visit.
- (3) To find out the utility of information technology in Medical libraries.
- (4) To ascertain how much user are using CD-ROM and online services.
- (5) To identify different methods of getting bibliographic detach.
- (6) To find out how fast your query fulfilled through online .
- (7) To determine the opinion of the user toward the system.
- (8) To find out whether networking is available in medical libraries.
- (9) To find out that computers are sufficient in medical libraries.

- (10) to ascertain the opinion of the user regarding user education in medical libraries.
- (11) To assess the satisfaction of the user regarding overall functions of Health Science libraries.
- (12) To findout the awareness of user to the medical library services.
- (13) To find out the awareness of users regarding computerised services provided by medical library.
- (14) To findout the satisfaction of user with the computerised service in medical library.
- (15) To the assess the satisfaction of the users with regard to the working hour of dept. sections of medical library.
- (16) To find out the impact of Automation on{hours}keeping access of medical libraries.
- (17) To identify the problem faced by user of medial library in using Information Technology.
- (18) To find out whether the automated system will same the time of Medicos.
- (19) To determine the opinion of user towards the photo copying services provided by Medical libraries.

- (20) To findout that after computerisation of library services, the work would be improve
- (21) To know as the result of use of Information Technology would the status of staff is same, improve.
- (22) To know whether the library uses multimedia.

Hypothesis

- (1) Automation has made a considerable impact on the services of medical library in Delhi.
- (2) Most of the user are not aware about the various computerised services provided by medical libraries.
- (3) Automated library services in the health science libraries may be more beneficial than manual services to the user.

Methodology:

There are several survey technique available for the user studies such as questionnaire method, personal interview, interview by telephone, dicey method and observation. For this study the investigations used questionnaire, observation and informal interview for the collection of data.

Questionnaire:

This method of data collection is quite popular, particularly in case of big enquiries. It is called the heart of survey operation. A questionnaire consists of a no. of questions printed in a definite order on a form. In this method a questionnaire is given to the person concerned with a request to answer the question and return the questionnaire. The respondents have to answer the question on their own.

Questionnaire are of two type:

1. Open questionnaire: In this type of questionnaire, no answer is given against the question. Responder supply the answer in his/her own words.
2. Closed questionnaire: In this type of questionnaire, answer is given against the question the respondent has to select the alternate answer written against the question so the work of the respondent is to tell on the right answers.

Observation

This method implies the collections of information by way of the investigators own observation, without interviewing the respondent. In this method we observe things around us. The observation obtained relates to what is currently happening and is

not complicated by either the past behaviour or future intentions or attitude of respondent. This method is no doubt an experience method and the provided by this method is also very limited.

Informal Interview:

In this method investigator ask only some question to the respondent and lib staff relating to services and facilities provided by the lib. Data Collected by this method is used to formulate finding and suggestions.

Tools used for the study:

Questionnaire, observation and informal interview are used as the tools for the study.

Sample population

The present study is conducted on a sample of 160 users of health science libraries in Delhi. The questionnaire was collected to 200 users as well as 100 staff. The total number of 180 filled questionnaire were returned back from users and 90 from the staff. The Investigator selected only 160 for the analysis of data from the users and 80 from staff, because of poor response from the respondents.

Variable taken:

In order to achieve the objective of the study mainly two variables are taken for detailed analysis.

- Student (1) Graduate (2) Postgraduate students
- Staff of health science libraries

Sample Population:

The present study is conducted on a sample of 160 users of Health Science Libraries of Delhi. The questionnaire was circulated to 200 user a total no of 180 filled questionnaire were returned back investigator selected 160 for the analysis of data from the user. The investigator choose three health science libraries for the study. (AIIMS, NIHFW, NML).

Variable Taken:

In older to achieve the objective of the study the one variable are taken for detailed analysis:

- Student (1) Graduate (ii) Postgraduate the group consist the student from undergraduate to postgraduate medial students.

Pilot Survey:

A pilot survey was under taken to ensure that the questionnaire were as meaning full to the average respondent as they were to the investigator, and to decide which questions were relevant for the purpose of the study. The questionnaire were distributed to 25 users for the pilot study which was very helpful in modifying the questionnaire suitability.

Data Collection Procedure:

For the present study the duly filled questionnaire, observation and informal interview were taken by the investigator. The investigator asked the permission of the head of the library and distribute the questionnaire to the users as well as staff.

Data Analysis Method:

The data collected through questionnaire are organised quantity and tabulated by using statistical methods, table, percentage, this is used for the formulation of the findings through observation and informal interviews are used for the formulation of the findings.

CHAPTER-IV

ANALYSIS AND INTERPRETATIONS

Data Analysis and Interpretation

In this chapter the investigator has shown the entire data gathered by the statistical survey of the inquiry as a tabular form. The problem under investigation is Impact of on library and information services of health science libraries in Delhi: A study.

For getting the result the investigator has adopted the method of analysis of data.

In this chapter investigator discussing analysis and interpretation of data which is collected through schedule, observation and questionnaire method.

Frequency of Libray Visit

Table 1

Frequency of Libray Visit

S.No.	Frequency	No of Respondence	Percentage
1.	Daily	85	53.125
2.	2-3 times in week	35	20.625
3.	Once in month	7	4.375
4.	Once in a week	15	9.375
5.	Seldom	12	7.500
6.	No response	8	5.00

The Analysis of data shows that out of 160, 85 (i.e.) 53.125 users visit the Medical Libraries daily, 20.625 of them i.e. 33 visits 2-3 times in a week, 4.37% go to the library once in month, 9.375 of the user are responded that they visit library once in a week, 7.50 % goes to the library seldom, 5% of the user have not given any response to the question.

So it is clear from the analysis that 53.125 % users are visiting the library Daily.

Purpose of Visit

Table 2

Purpose of Visit

S.No.	Purpose	No. of respondent	Percentage
1.	Study purpose	105	65.625
2.	Borrow books	6	3.750
3.	Research purpose	29	18.125
4.	Leisure time	4	2.500
5	Any other	11	6.875
6.	No response	5	3.125

It is clear from the table 2 that 65.625 users visit the library for the study purpose, 3.750% of the user visit the library to borrow book and 18.125% of them visit the library for the research purpose only very low percentage of user 2.50% visit the library to spend leisure time, 6.785% of users visit for other purposes, 3.125% of users does not have any idea about the question.

Awareness to the Library Services

Table 3

Awareness to the Library Services

S. No.	Services	No. of Respondent		
		Aware	NotAware	No Response
1	Reference Service	105 (65.625%)	45 (28.125%)	10 (6.25%)
2.	Circulation Service	70 (43.75%)	50 (31.25%)	40 (2.5%)
3.	Periodical Service	120 (75%)	30 (18.75%)	10 (20%)
4.	Inter Library Loan	10 (6.25%)	130 (81.25%)	20 (12.5%)

The detail furnished in table 6 shows that 65.625% of users are aware and 28.125% are not aware with the reference service similarly 43.75% and 75% of the user are aware of circulation service and periodical services. It also clear from the table that a major portion of the users, 81.25% are not aware of inter library loan service.

Utility of CD ROM & Online Service

Table 4

Utility of CD ROM & Online Service

S.No.	Services	No. of Respondent	Percentage
1	CD ROM	93	58.125
2	Online Service	67	41.875
3.	Total	160	100

It is clear from the table 4 that 93 i.e. (58.125%) of the clientele are using CD ROM regularly in the Health Science Libraries of Delhi, and 67 i.e. (41.875%) of the user of the Health Science Libraries are using the online service. So it is clear that CD ROM services is widely used by the health Scinece libraries.

Medium of getting bibliographic Details

Table 5

Medium of getting bibliographic Details

S.No.	Medium	No. of Respondent	Percentage
1	Hard copy	6	3.750
2	Online	27	16.875
3	CD ROM	127	79.375

It is evident from the table 5 that most of the users 79.375 getting the bibliographic details from the CD ROM databases, 16.875% of the user are getting the bibliographic details from the online and the remaining 3.750% of the user are depend for bibliographic details on the hardcopy, from the analysis it is clear that CD-ROM medium is widely used and followed by online and hardcopy.

Users Opinion About the System

Table 6

Users Opinion About the System

S.No.	System	No. of Respondent	Percentage
1.	Manual	5	3.125
2.	Automated	146	91.250
3.	No response	9	5.625

It is clear from the table 6 that 3.125% of the users are satisfid with the manual system in the Health Science Libraries because of the complexity in automation of libraries.

91.250% of the users are of the view that automated system is best in the Health Science Libraries ,

because automated system save the time of the user as well as staff, 5.626% of the users does not give any response to this question.

Opinion about the photocopying service

Table 7

Opinion about the photocopying service

S.No.	Satisfaction Level	No. of Respondent	Percentage
1.	Satisfactory	63	39.375
2.	Unsatisfactory	81	50.625
3.	No response	16	10.000

It is clear that from the table 7 that 39.375% of users are satisfied with the photocopying services provided by Medical Library, 50.625% of users are not satisfied with the photocopying service and 10.00% of the users doesn't have any answer.

It is clear from the analysis that most of the user i.e. 50.625% of the users are not satisfied with photocopying service because there is no sufficient photocopying service in Medical Libraries and the time of users are wasted in photocopying service rather than studying.

Adequacy of Computer terminals

Table 8

Adequacy of Computer terminals

S.No.	Sufficient	No. of Respondent	Percentage
1.	Sufficient	42	26.250
2.	² <u>Insufficient</u>	<u>105</u>	65.625
3.	No Response	13	8.125

Computer sufficient in Health Science Libraries

It is evident from the table that 26.250% of the users expressed that there are sufficient no computers in medical libraries. But 65.625% of the users are expressed that computer available in Health Science Libraries are insufficient only small percentage 8.125% of the users does not give any response to this questions.

How fast your query is fulfilled through online

Table 9

How fast your query is fulfilled through online

S. No		within 1/2 an hour	One day	A week or more
1.	No. of Respondents	84	61	15
2.	Percentage	(52.50%)	(38.125%)	(9.375%)

It is clear from the table that 52.5% users are of view that their query is fulfilled through online within 1/2 an hour. 38.125% of the users expressed that query fulfilled through online in one day, lastly only 9.375% of the users said that a week or more is required to a query to be fulfilled through the online.

User education is needed in Health Science Libraries

It is evident from the analysis that a very high percentage 88.75% of users are express that there should be a user education in Health Science Libraries, significantly less percentage of the users, 11.25% are of the view that user education is not necessary in Health Science Libraries to retrieve information.

Type of Networking available in Health Science Libraries

Table 10

Type of Networking available Health Science Libraries

S.No.	Networking	No of Respondent	Percentage
1	LAN	145	90.625
2	WAN	9	5.625
3	MAN	6	3.750

It is evident from the table that 90.625% of the user

are of the opinion that LAN is widely used in medical libraries as far as WAN is concerned only 5.625% are aware with such networking lastly only 3.750% users are acquainted or familiar with MAN facility.

Views about the staff

Table 11

Views about the staff

S.No.	Views	No. of Respondents	Percentage
1	Most helpful	42	26.250
2	Helpful	93	58.125
3	Not helpful	15	9.375
4	No Response	10	6.250

It is evident from table 11 that 26.250% of users expressed that the staff of computerised Health Science Libraries is most helpful 58.125% of user indicate that the staff of Health Science Libraries is helpful but 9.375% of users are not satisfy with the staff and a less percentage i.e. 6.250% of users does not give any response to this question.

Satisfaction with Overall functions

Table 12

Satisfaction with Overall functions

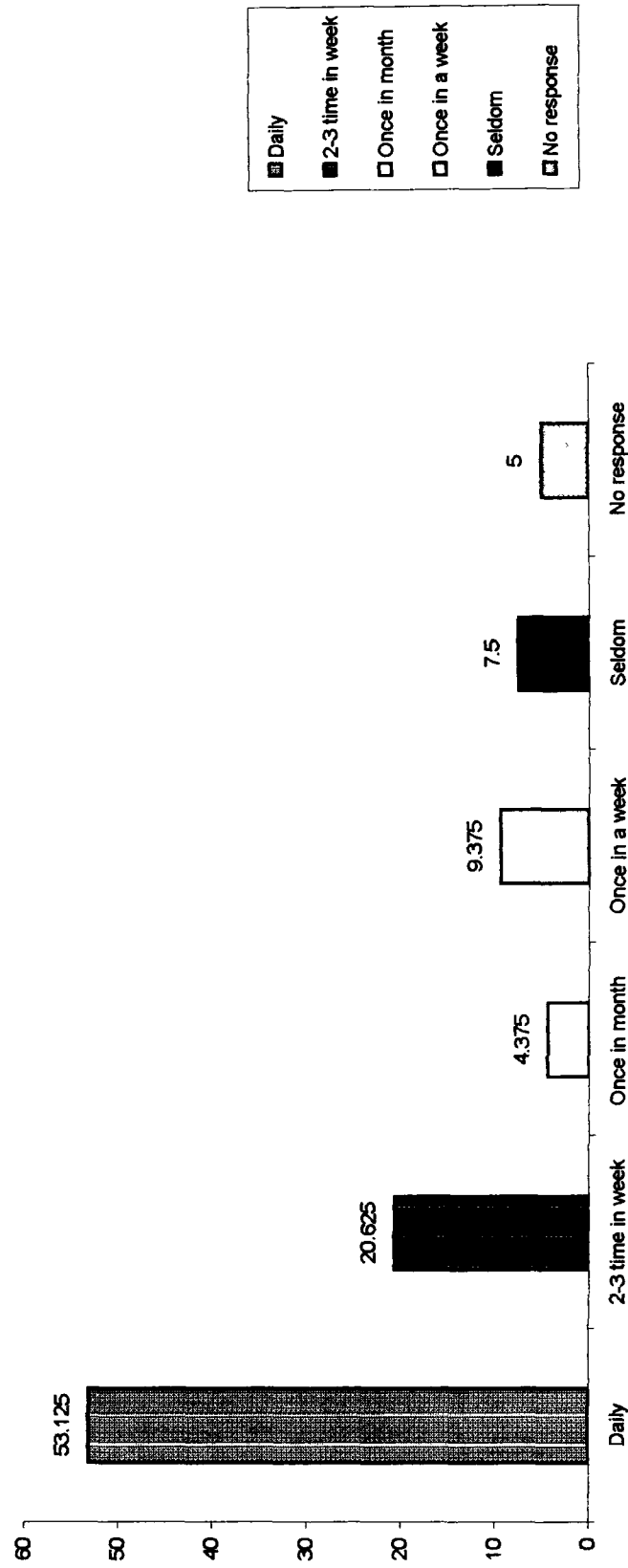
S.No.	Satisfaction level	No. of Respondent	Percentage
1	Satisfied	41	25.625
2	Not satisfied	94	58.750
3	No Response	25	15.625

It is evident from table 12 that most of the users 58.750% i.e.(94 out of 160) are not satisfy with over all functions of Health Science Libraries. Whereas 25.625% are satisfied with overall functions of Health Science Libraries, 15.625% of users does not give any response to this question.

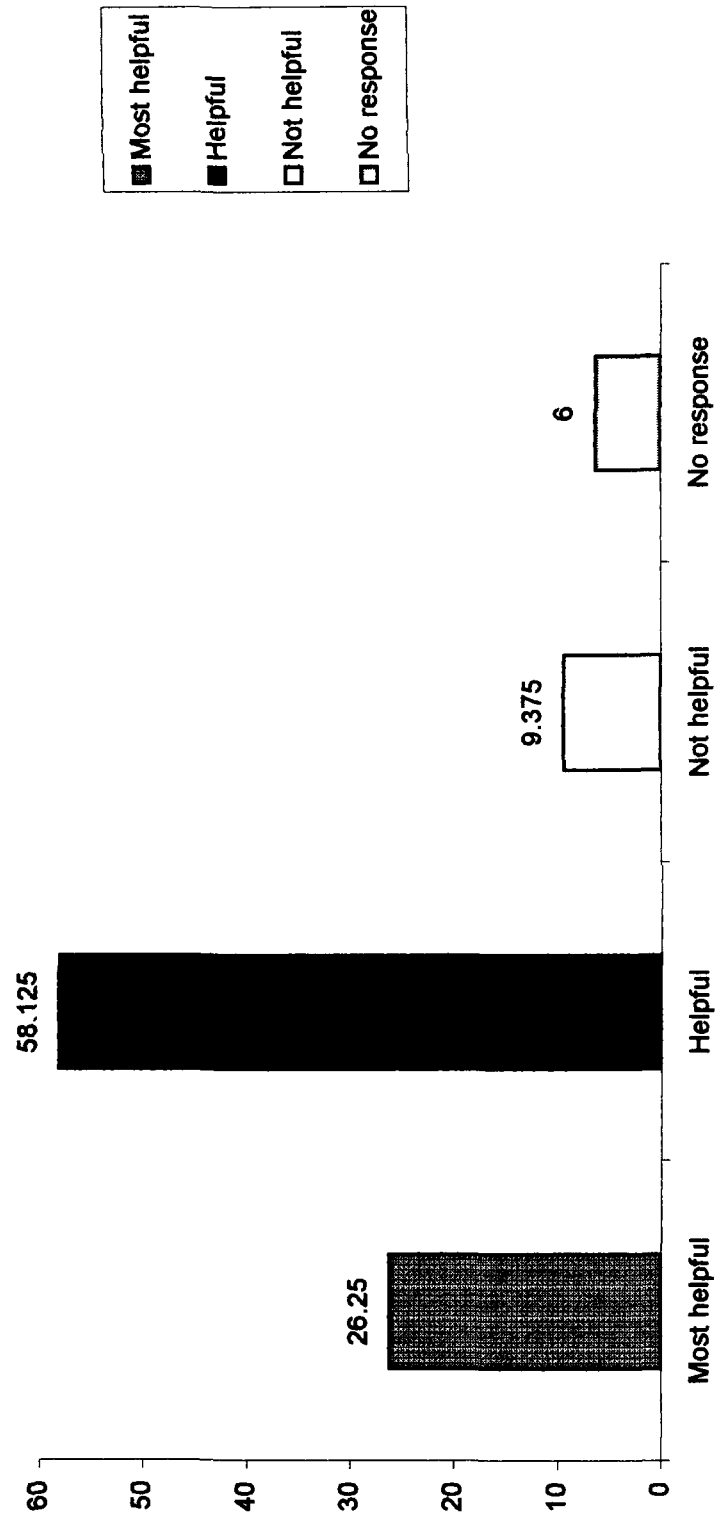
Need of Training in Health Science Libraries

It is clear from the analysis that 69.375% of users expressed that there should be special training to the user of the library education in the library to teach them how to use computerized services in Health Science Libraries, 18.750% users are of the view that there is no requirement of such type of user education because the staff is fully responsible to provide the services to the users, 11.875% of users does not have any idea about the answer.

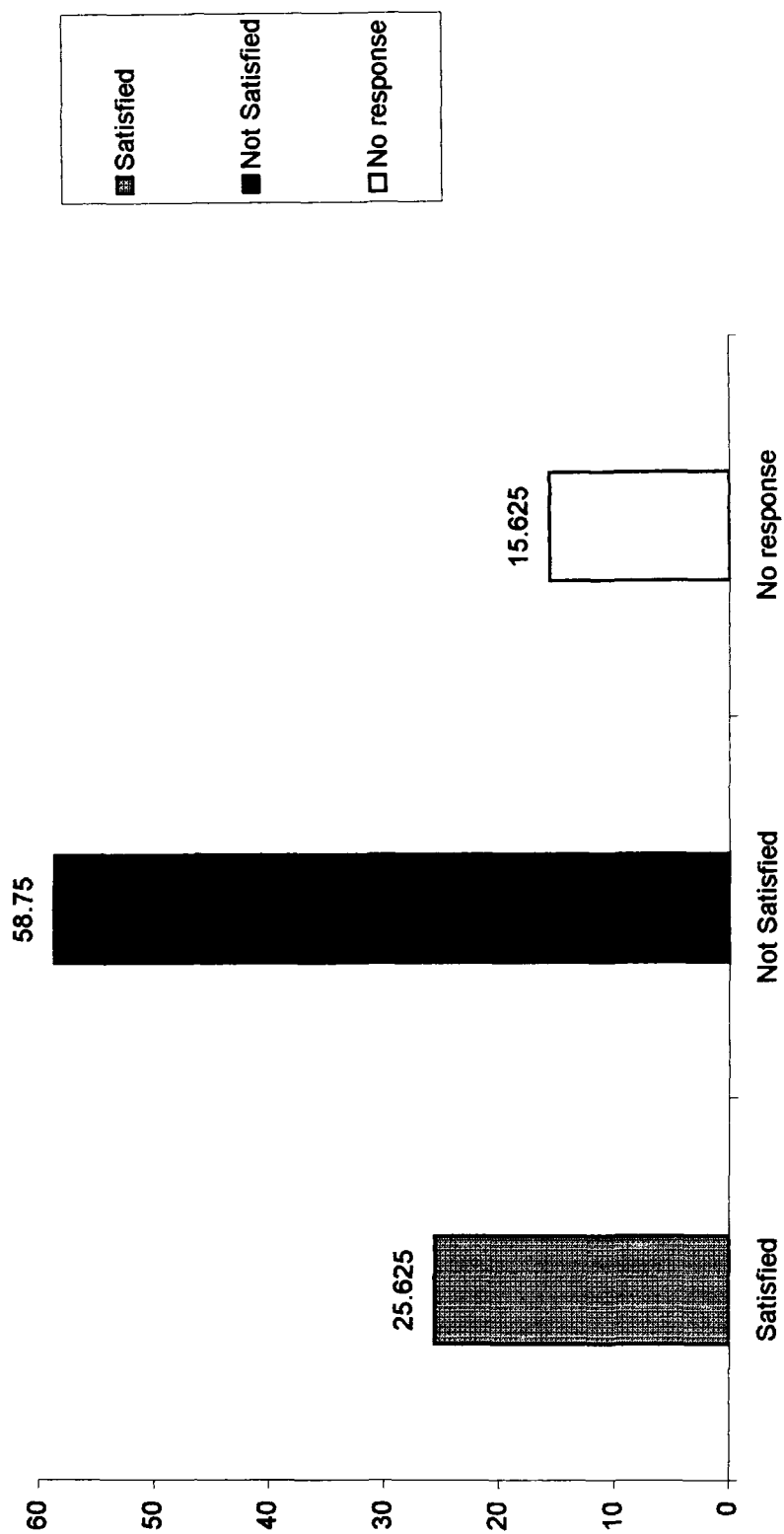
Frequency of Library Visit



Views about the staff



Satisfaction with overall functions



CHAPTER-V

CONCLUSION, FINDINGS AND SUGGESTIONS

Conclusion
Findings
Tenability of Hypothesis
Suggestions
Recommendation for the further Research

Chapter-V

Conclusion, Findings and Suggestions

- Conclusion**
- Findings**
- Tenability of Hypothesis**
- Suggestions**
- Recommendation for Further Research**

Conclusion

This chapter deals with the conclusion of present study

The main aim of this study was to find out the impact of automation on library and information services in health science libraries in Delhi. Survey has been conducted in three health science libraries of Delhi which are fully computerised.

In order to achieve the objective of the study the following, hypothesis were formulated and tested

- (1) Automation has made and considerable impact on the services of health science libraries in Delhi.
- (2) Most of the users are not aware about the various computerised services provided by the health science libraries in Delhi.

- (3) Automated library services in the health science libraries may be more beneficial than manual services to the users.

The present study was conducted on sample of 160 users in health science libraries in Delhi. Questionnaire, observation, interview method were used to collect data and analyses to throw light upon factors mentioned in the objective of the study.

Following are the major findings of the present study

Findings

The following are major findings that are generated from this study

- (1) High percentage of the users visits the library regularly.
- (2) Most of the users visit the health science library for study purpose and also for research purpose.
- (3) Majority of the users are using CD-ROM in health science libraries.
- (4) Most of the users are getting bibliographic detail from the CD-ROM database.

- (5) Only low percentage of users are getting bibliographic detail on the hardcopy.
- (6) Majority of the users express that their query is fulfilled through online within half an hour.
- (7) Majority of the users prefer automated library than manual one.
- (8) Most of the health science library are using LAN Local Area Network to manage housekeeping application followed by WAN TO excess foreign databases.
- (9) Majority of the users express that number of terminals available in health science libraries are in adequate.
- (10) High percentage of the users express that user education is needed in the health science libraries for the maximum use of resources.
- (11) Majority of the respondent are aware with the periodical service, circulation service, reference service.
- (12) Most of the respondent are not aware with the inter library loan.

- (13) Majority of the users are satisfied with the internet service of health science library.
- (14) Most of the users are not satisfied with the SDI , and CAS service provided by the health science library.
- (15) Most of the users are (express) that libraries are using multimedia.
- (16) Majority of the user^s said that after computerisation of library service the work would be improved
- (17) Majority of the users said that after computerisation of library services the efficiency of services has been improve .
- (18) Most of the users are not facing any problem while they are using computerised library services.
- (19) Most of the users are of the view that after implementation of Information Technology, the status of staff has been improved to certain extent.
- (20) Most of the staff express that after computerisation of libraries the efficiency of work has been improve~~d~~

- (21) Most of the users are not familiar with the multimedia
- (22) It is observed that in health science libraries almost all section except reference section of the libraries has been computerised to provide better service to the users
- (23) Majority of the respondent are not satisfied with the overall functions of health science libraries.

Tenability of Hypothesis

The tenability of hypothesis can be checked in the light of above findings

Hypothesis - I

Automation has made a considerable impact on the services of health science libraries in Delhi.

It is clear from the result of the study that most of the users express their views that automation has made really and impact on various services of health science libraries of Delhi. So the hypothesis became fully true.

Hypothesis - II

Most of the users are not aware about the various computerised service provided by health science libraries.

It is evident from the result of the study that most of the users are aware of computerised services provided by the health science libraries. But some percentage of the users are not aware of these services so hypothesis is not fully true.

Hypothesis - III

Automated library services in health science libraries may be more beneficial than manual service to the users.

Computerised library services provided by health science libraries are beneficial to users. It is clear from the result of the study that most of the users are satisfied with the computerised library services provided ^{by} health science libraries. Analysis also reveal that it is very much beneficial to user to ^{access} excess information quickly for their study and for research purpose . So the hypothesis became true.

Suggestions

Present study put forward the following suggestion to be implemented for the improvement of computerised service and facilities in health science libraries

- (1) User education programme should be started in order to familiarised the computerised libraries services health science libraries
- (2) Library should also conduct the users study to find out the exact need of the users.
- (3) All health science libraries should be provided internet facility to their users.
- (4) Health science libraries should be open round clock
- (5) Health science libraries staff should be accountable.]
- (6) Charge of the photocopy should be reduced.
- (7) Number of ^{terminals} machines should be increased and quality of copy should be improved in the xerox service of photocopying service.
- (8) Better accessibility of the library members to the online search facility.

- (9) There should be a bulletin board service to display of names of all journals available in the library.
- (10) User should be made more aware about the various facility available in a library and information booklets.
- (11) Health science libraries should acquire sufficient copies of all latest text books and entrance text book etc.
- (12) Library should subscribe maximum number of journals to meet the information needs of the users journals.
- (13) There should be system for early acquisition of newer addition with more number of copies and removal of very old editions.
- (14) Health science libraries staff should be well trained at their position.
- (15) The computer facility should be made available for a long time with staff giving information regarding its usage.
- (16) Internet services should be extended with respect of time.

- (17) The complaint/suggestion box along with paper must at a place, not normally observed by library staff, but clearly accessible to users.
- (18) All facilities i.e. CD-ROM, audiovisual, internet, fax, email must be open self system with a supervision, all these facility must be displayed with full detail of facility and timings so that every user can no all the service.

Recommendation for further Research

- (I) The same study can be conducted to find out the satisfaction of user towards computerisation of Health Science Library.
- (II) A study can be conducted to find out the impact of internet in Health Science Library and medical education.
- (III) A comparative study can also be conducted to the differences of services among Health Science Library of Delhi.
- (V) A study can be conducted to know the impact of Automation among different types of libraries like Agriculture Engineering etc.

APPENDIX-I

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APPENDIX-II

QUESTIONNAIRE ADMINISTERED TO USERS

Name :

Name of Organisation :

Name of Library :

1. Do you visit Health Science libraries regularly Yes/No

If yes your frequency to visit in Health Science Libraries

(a) Daily ()

(b) 2-3 times in a week ()

(c) Once in a month ()

(d) Once in a week ()

(e) Seldom ()

2. What is the main purpose of your visit to Health Science Libraries

(a) For study purpose ()

(b) For research purpose ()

(c) To borrow book ()

(d) To spend leisure time ()

(e) Any other (Please specify) ()

3. Are you aware with the following services provided by health science libraries

- | | |
|--------------------------------|--------|
| (a) Reference service | Yes/No |
| (b) Circulation service | Yes/No |
| (c) Periodicals service | Yes/No |
| (d) Inter-library loan service | Yes/No |

4.a. Do you think online and CD-ROM services are essential in the libraries Yes/No

4.b If Yes how often you are using the following CD-ROM database (Please tick)

Frequently Sometime Rarely Never

AIDS Drug

Adonis

Annals of information

Biological Abstract

Chemline

Full text

Popline

Science Abstract

Toxline

Any other database (Please mention).....

4.c If you are not using CD-ROM database, Please tick the reason

- | | |
|--|--------|
| (a) Non availability of CD-ROM database of your subject interest | () |
|--|--------|

(b) Updating are delayed ()

(c) Printing charges are high ()

(d) Any other reason (Please specify).....

5. On which medium do you prefer to get bibliographical details.

(a) Hard Copy ()

(b) Online ()

(c) CD-ROM ()

6. In your opinion which system is better either manual or Automated

(a) Manual ()

(b) Automated ()

7. Do you think that user education is needed in Health Science
Libraries Yes/No

8. How fast on average your query is fulfilled through online system

(a) Within half an hour ()

(b) One day ()

9. Whether networking is available in Health Science libraries

Yes/No

9.a. If yes, mention the purpose for which it is used.....

9.b. Which type of networking is there in a health science libraries

(a) LAN ()

(b) WAN ()

(c) MAN ()

9.c. whether your libraries is the member of any networking service

Yes/No

If Yes please specify.....

10. Do you think health science libraries are systematic in getting
information Yes/No

10.a If no, please tick the appropriate reason

(a) Lack of information technology ()

(b) Lack of well trained staff to use ()

(c) Lack of proper national information system
on health science libraries ()

11. Are the users satisfied with the photocopying services provided
by the health science libraries Yes/No

12. Do you pay for the information you get (please tick)

(a) Through CD-ROM ()

(b) Through online ()

13. Are you facing any problem while you are searching information throw
online

Yes/No

If yes please mention.....

14. Are you satisfied with the following computerised services
provided by the health science libraries

(a) Internet service ()

(b) Electronic Mail ()

- (c) Reprographic service ()
- (d) Xerox Service ()
- (e) CAS ()
- (f) SDI ()

Any other please specify

15. Are you satisfied with the staff of the computerised health science libraries ()
16. Do you have Email account ()
17. Are you given any kind of training to use computerised service in health science libraries Yes/No
18. What is your opinion about the staff of computerised health science libraries
- (a) Most helpful ()
- (b) Helpful ()
- (c) Not helpful ()
- (d) No response ()
19. Are the number of computer available in the health science library are sufficient to meet your information needs. Yes/No
20. Are you satisfied with the timing different sections of health science libraries ? If no please indicate how many hour should they be extended
- (a) Reference section ()
- (b) Internet service ()

- (c) Circulation service ()
- (d) Inter library loan service ()
- (e) Reprographic service ()

21. Are you satisfied with the overall function of health science libraries
Yes/No

22. Give your overall assessment of library with constructive suggestion, If any for betterment of library facilities.

Thanks

APPENDIX-III

QUESTIONNAIRE ADMINISTERED TO STAFF

Name :

Name of Organisation :

Name of Library :

1. Which are the sections computerised in your library

- | | |
|----------------------------|-----|
| (a) Acquisition section | () |
| (b) Technical section | () |
| (c) Cataloguing Section | () |
| (d) Classification section | () |
| (e) Reference section | () |

2. Do you provide the following library services

- | | Manual | Computer |
|-------------------------------|--------|----------|
| (a) Literature search | () | () |
| (b) SDI | () | () |
| (c) Current Awareness Service | () | () |
| (d) Audio-visual Service | () | () |
| (e) Reference service | () | () |
| (f) Translation service | () | () |
| (g) Reprographic service | () | () |

3. Whether networking facility is available in your lib.
 - (a) Yes ()
 - (b) No ()
4. Who maintain the Networks
 - (a) Library Staff ()
 - (b) Computer professionals ()
5. Do you have any provision of on-line searches.
 - (a) Yes ()
 - (b) No ()
6. If yes, then do you allow your user to do on-line search themselves
 - (a) Yes ()
 - (b) No ()
7. If yes, then how this service is available (please tick)
 - (a) Against charge ()
 - (b) Free ()
8. Have you created your own software
 - (a) Yes ()
 - (b) No ()

If Yes Please specify
9. Do you provide SDI service Yes/No
 - (a) If yes since when started
 - (b) Subject field

(c) No of user profile.....

10. Do you provide Reprographic services Yes/No

(a) If yes, which of the following service are provided by your lib. tick () whichever is applicable.

- (a) Photostat ()
- (b) Microfilming ()
- (c) Microfiche ()
- (d) Thermofax ()
- (e) Any other ()

10. (b) If no what are the reason tick () whichever is applicable

- (a) Lack of funds ()
- (b) Lack of trained staff ()
- (c) Costly equipment ()
- (d) Any other ()

11. Do you have internet facility in your library Yes/No

13. After the computerization, library services would be

- (a) Improved
- (b) Deteriorated
- (c) About the same
- (d) Don't say

14. After the system was installed would your work be

- (a) More complicated ()
- (b) Less complicated ()

(c) About the same ()

(d) Don't know ()

14. As a result of use of IT would the status, designation of your position be

(a) Same ()

(b) Down graded ()

(c) Upgraded ()

(d) Don't say ()

15. (a) Does your library uses multimedia Yes/No

(b) If yes how long you have been using

(1) Less than 6 month ()

(2) 6-12 months ()

(3) 1-3 years ()

(4) 3-5 years ()

(5) Above 5 years ()

16. Are you satisfied with the overall function of the Health Science Libraries Yes/No

17. Please give necessary suggestions to improve the library services.

.....

.....

Thanks